

## ABSTRACT

### **PLANAR MAGNETIC HEAD AND FABRICATION METHOD THEREFOR**

5 The magnetic head of the present invention, includes a second magnetic pole (P2 pole) that is fabricated upon a write gap layer that is deposited upon a flat surface. To achieve the flat surface, a P1 pole pedestal is formed upon the P1 pole layer with a sufficient thickness that the induction coil structure can be fabricated beneath the write gap layer. In the preferred embodiment, an etch stop layer is formed upon the P1 pole layer and an ion etching process is utilized to form the induction coil trenches in an etchable material that is deposited upon the etch stop layer. Following the fabrication of the induction coil structure a CMP process is conducted to obtain a polished flat surface upon which to deposit the write gap layer, and the P2 pole is then fabricated upon the flat write gap layer.

10 The magnetic head of the present invention can be reliably fabricated with a more narrow P2 pole tip/base width, such that data tracks written by the magnetic head are likewise narrower. A hard disk drive including the magnetic head of the present invention therefore possesses narrower written data tracks, such that the areal data storage density of the hard disk drive is increased.